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Designing impact evaluation for students' engagement with communities in planning education

Louie Sieh and Andrea I. Frank

Abstract

Universities increasingly promote community engagement that involves students. However, very little has been done to evaluate student-community engagement (SCEs) for their impact on 'the community'. This research innovatively juxtaposes literature on the evaluation of planning and public policy with three different instances of SCE to explore the scope and nature of such impact evaluation within the context of planning education. Results suggest considerable potential of a naturalistic, ongoing and integrated evaluation approach for and with communities in planning-related SCEs, and by extension, as a practical theory for evaluation design in community planning itself.

Keywords

student-community engagement; community engagement; impact; planning evaluation; integrated evaluation; evaluation design; planning education; community planning.

Introduction

Student-community engagement (SCE) refers to a range of activities that have a considerable tradition in the education for professions in the fields of planning, architecture and engineering, where theoretical knowledge needs to be linked with application and action. SCEs involve learning through direct interaction between students and real-world actors via pedagogies such as experiential learning (EL) (Chupp and Joseph 2010), problem-based learning (PBL) (Brand and Rincon 2007; Millican and Bourner 2014), transformative learning (Millican and Bourner 2014), work-based learning (Freestone et al. 2006), and

participatory action research (PAR) (Winkler 2013). SCE has been termed elsewhere as ‘student engagement activity’ (Frank and Sieh 2016), ‘community engagement’, ‘social engagement’ and ‘public engagement’ (Millican and Bournier 2014). There are similarities with North American ‘service learning’, but without the explicit focus on service. SCE may be conceived as a sub-set of university-community engagement (e.g., Millican and Bournier 2014) and as such, an essential aspect of the mission of an engaged university (Trencher, et al. 2014). In sum, there is no universally agreed definition; what is common is interaction between students and *community*, whereby the latter is a very broad concept as Hillery’s (1955) ninety-four definitions illustrate. For our purposes, in planning and urban design, *community* is a group of end users of planning outcomes, excluding government officers, developers and remote property owners. Planning-related SCEs involve diverse activities ranging from developing design proposals to regeneration strategies. From an educator’s viewpoint, SCE offers opportunities to promote agendas of democratizing planning, and developing communication and professional skills. For resource-strapped municipal governments and community organizations, these engagements promise low-cost contributions to their work amongst other benefits.

Overall, there is ample evidence of the value of SCE for learners and learning (e.g., Torres 2012; Millican and Bournier 2014). However, with few exceptions (Cruz and Giles 2000; Stoecker, et al. 2009; Reeb and Folger 2013; Schroeder, et al. 2009), the *effects on the community* have been little explored (Reeb and Folger 2013; Erickson 2014; Millican and Bournier 2014). The diffuse literature on evaluation of university-community engagement (e.g., Bringle and Hatcher 2002; Trencher, et al. 2014; Porter, et al. 2015; Shiel, et al. 2016) has paid limited attention to community impacts to date (Millican and Bournier 2014; Reeb and Folger 2013; Stoecker and Tryon 2009). Yet, given universities’ ethical duty of not harming those they involve in their research or teaching, there is an urgent need to establish methods to systematically evaluate effects from community-university engagement in general, and student-community engagement in particular.

Research on community impact of SCE in the disciplines of *planning and design* is even more scant, displaying a lack of consistent methods and agreed practices for evaluation of SCEs. Erickson (2014), for example, reviewed 20 planning and design service-learning projects at Iowa State University concluding that communities particularly valued students’ fresh

perspectives. Bose and Wilson (2014) and Winkler (2013) offer single-case studies of a student project in North America and South Africa, respectively, recording various levels of satisfaction and dissatisfaction by community with the engagement and project outputs. Only Winkler (2013) links any of this back to planning or evaluation theory. In all, a weak evidence base suggesting further research is needed.

This paper takes on Angotti et al.'s (2011) challenge to develop a critical, reflective approach to learning in and through community engagement by exploring the nature and potential scopes of assessing effects of SCE on 'the community' in the discipline of planning. It lays foundations for systematic ways of evaluating effects of SCEs by developing an evaluation framework which draws innovatively on literatures of planning (and policy) evaluation and on implications from the evaluation of three empirical cases. In conclusion, we suggest practical ways on how to embed evaluation of effects on communities within SCEs and planning curricula.

University-Community Engagement and Evaluation

This study draws on four literatures: first, evaluation of university-community engagement as context of SCE operation; second, evaluation in the field of planning as it provides approaches as well as content and subject matter on which to base the design of SCE evaluation; third, public policy evaluation as source for alternative evaluation approaches; and fourth, theory-based evaluation including social impact assessment.

The literature on the evaluation of university-community engagement (e.g., Bringle and Hatcher 2002; Trencher, et al. 2014; Porter, et al. 2015) covers multifarious themes such as the evaluation of types of partnerships (e.g., Millican and Bournier 2014; Reardon 2006), effectiveness of student learning (Tarantino 2017), and to a very limited extent, impact on community (Millican and Bournier 2014; Reeb and Folger 2013; Stoecker and Tryon 2009). The diversity of concepts used, suggests that scholars are just beginning to make sense of evaluation of SCEs without firm ideas of suitable approaches and methods. For example, Winkler (2013) places her analysis in planning theory (e.g., Healey 1997; Friedmann 1987) and Participatory Action Research (PAR) frameworks, while Erickson (2014) and Bose and Wilson (2014) make no reference to planning evaluation literatures. Nevertheless two themes stand out. First, issues important to the community, both positive and negative,

almost inevitably arise outside of any pre-conceived framework that educators customarily employ for an evaluation. Second, student activities are part of much wider, messier and ongoing realities of planning-in-the-world, so a full account of impacts will be impossible to articulate (Erickson 2014).

By contrast, the literatures on planning and policy evaluation are well developed. The planning evaluation literature – on one hand – provides dimensions of planning process and results that planners consider important, but traditionally these address *ex ante* assessment or appraisal. In other words, they are decision-support tools for assessing plan content (e.g., Oliveira and Pinho 2010) or investment options (Alexander 2006) as in Lichfield's Planning Balance Sheet Analysis and Morris Hill's goal achievement matrix (Guyadeen and Seasons 2016). On the other hand, public policy evaluation literature applied to planning focuses on *ex post* evaluation of planning as well as more holistically on the processes as well as the content of planning. Thus, the latter is closer to what our research seeks to address, which is the evaluation of whether community needs were met in cases when community involvement is part of planning education (see also Faehnle and Tyrvaenen 2013; Brown and Chin 2013; Laurian and Shaw 2009; Innes and Booher 1999; Terryn, et al. 2016).

More recent is the emergence of *integrated evaluation* in planning, where outcomes are co-constructed with evaluands, before, during and after planning. Here, evaluation permeates planning activity, itself "an 'opportunity' to elaborate strategies and 'organize hopes'" (Sandercock and Lyssiotis 2003 in Cerreta 2010, 383), and actively directs the trajectory of the planning situation (Girard 2010). Integrated evaluation (Cerreta 2010) can be conceived as a convergence of planning evaluation and evaluation in the wider public sector (e.g., Carmona and Sieh 2004; Carmona and Sieh 2008; Alexander 2006; Oliveira and Pinho 2011; Guyadeen and Seasons 2016).

Integrated evaluation is "based on interpretation and comparison and able to activate and develop relationships among persons, and among persons and their environment" (Girard 2010, 307). It reflects ideals of naturalistic, constructivist evaluation (Guba and Lincoln 1989) and theory-based evaluation (Chen 1990), a broad concept which includes mainstream approaches such as Social Impact Assessment (SIA) and concepts such as Theory of Change. The focus of these evaluation approaches is on understanding or anticipating *how* change

happens, rather than *what* has changed or could change, which is more classically planning evaluation's aim¹. Theory-based evaluation anticipates through a 'change model', both how and what change occurs in a social situation as a result of a policy or program intervention and therefore offers a way to conceptualize SCE effects on communities. This has become a cornerstone of our framework development below.

Research Approach and Methods

Given the paucity of previous work, we adopted an exploratory approach which entails iterative theory building (Eisenhardt 1989). This consisted of collecting data by interviewing participants of selected SCE cases and subjecting this data to an *a priori* coding. Further categorizations and relationships were then induced by juxtaposing results with 'what might be important to evaluate' derived from the evaluation literatures discussed earlier. This represents a theory-informed abductive process for turning insights from case data into recommendations for evaluation action, while also moving towards a practical theory² of how evaluation of student engagement in community planning should be designed.

Our data stem from cases which were drawn from a survey of UK and Irish planning schools (Frank and Sieh 2016) that uncovered a small pool of planning SCEs, none of which evaluated effects on involved communities. Selection criteria were that engagements had started at least 12 months prior to our study and involved students directly interacting with community. These criteria provided us three SCE cases of vastly different scope addressing different stages in the planning process: supporting an urban design intervention (Case 1), supporting pre-formal planning stages and grassroots participation' (Case 2) and assisting a local authority plan making effort (Case 3).

¹ The evolution of planning conceptualizations saw a shift from a focus on *what* – i.e. content of planning, epitomized by rational models - to a focus on *how* – i.e. process of planning such as deliberative models.

² Several concepts of 'practical theory' exist in a range of disciplines, including communication theory (Cronen 2001), public administration (Miller and King 1998) and teacher training (e.g. Handal and Lauvas 1987). They hold in common the notion that the dichotomy of practice-research is false, that practice and research are interlinked, and a practical theory is one that informs, and is informed by practice, and may comprise "a person's private, integrated but ever-changing system of knowledge, experience and values which is relevant to (their) practice at any particular time" (Handal and Lauvas 1987, 9). They draw upon a range of philosophical positions, ranging from the pragmatism of John Dewey and William James (see Cronen 2001), to the idea of 'theory of practice' of Argyris and Schön (see Kettle and Sellars 1996).

The literature on evaluation of SCEs together with studies addressing evaluation of public participation in planning and public policy more broadly was used to establish a two-tiered general set of community-directed dimensions describing either planning processes or outcomes that an SCE evaluation might potentially take account of (Table 1). The 9 items of Tier 1 are drawn from a cross-comparison of general frameworks for evaluation (Guba and Lincoln's 1989 'authenticity' and 'trustworthiness' criteria, and Albrechts' 2003 'planning rationalities'), and from the wider participation evaluation literature related to planning. The 19 Tier 2 items offer further details and focus.

Table 1. Issues of likely importance to SCE participants (derived from literature)

Tier 1 (potential dimensional categories)	Tier 2 (detailed dimensions)	Description
1. Event operation	Trustworthiness	Process is trustworthy in pursuit of sound results and of fairness: credible, independent and transparent.
	Design (of process)	SCE is well-designed, properly resourced and with well-defined tasks and roles.
	Delivery	SCE or planning process is well-delivered, including being competently run and enabling successful collaboration.
	Decision quality	Quality of resulting decisions through agreement is good.
	Cost-effectiveness	SCE or planning process is cost effective.
2. Planning 'ends'	Effectiveness	SCE process delivered results effectively.
	meaningfulness	SCE was meaningful and not superfluous for participants.
	Content quality	High quality substantive content of SCE results which are sustainable and legitimate.
	Legitimacy (of result)	Planning outcomes of SCE are seen as legitimate by all relevant stakeholders.
3. Consequences	Consequentiality of SCE effect	Effect is likely to have knock on effects long-term; there are follow on projects.
4. Capacity of participants	Problem-solving	Effective technical problem-solving through better knowledge, conflict resolution and consensual generation of workable and sustainable solutions
5. Progression	Impetus	SCE helps move towards alternative future.
6. Mutuality	mutual trust	Improvement of mutual understanding and trust, leading to better collaboration.
	public spiritedness	SCE contributes to public-spiritness by changing citizenship behavior.
7. Distribution of power	Empowerment	Participants are empowered
8. Participant satisfaction	Satisfaction (with process)	Participants are satisfied with process. Communication to them was effective.
	Satisfaction (with results)	Participants are satisfied with results. Communication to them was effective.
9. Principles, values or ideology	Fairness (of process)	Process is fair, including attitudes brought by participants, access to process, and inclusiveness, authenticity and impact of facilitation.
	Equity (of effect)	Social equity is improved as a result of the SCE

As next step, we conducted semi-structured interviews with the SCE course leaders (4), SCE brokers (4) and community members (4) across the three cases to gain first insights of issues,

concerns and dynamics. Open-ended questions (see Supplementary Material) based on Table 1 guided the discussion around issues that would likely be of concern to participants, and may therefore require evaluation. However, care was taken not to exclude hitherto unknown dimensions. Interview transcripts were coded *a priori* for Tier 1 dimensions by the authors to assess which dimensions were indeed of concern to participants and whether any dimensional categories were missing. This confirmed that Tier 1 categories could be effects of SCE interventions.

Adopting and building on the change model concept (Chen 1990) we constructed a 'Web of Change' (WoC) for each case (drawing on case-specific *in vivo* labels). Categories were first mapped as 'end situations' of effect pathways and, subsequently 'intermediate situations' were mapped as the path leading from 'start situations' prior to intervention to those 'end situations'. This process of visualizing relationships enabled the development of a coherent textual narrative. Antecedents for such an approach include techniques for 'problem structuring' via cognitive mapping of messy situations (see SODA =Strategic Options Development and Analysis, Ackermann and Eden 2010), and 'making sense' of complex multi-dimensional objects of study (Sieh 2014). The technique is well-suited for planning contexts as planning situations can be conceptualized as decision networks in which the management of multiple values happens through various collaborative activities into which technical and community knowledge is introduced (Cerreto 2010). Students' project reports, where available, were used to cross-check accounts of the work described in interviews.

Summarized accounts were written for each case, and analyzed across all three cases to crystallize categories and dimensions appropriate for SCE evaluation. This cross-case reading³ aimed to identify patterns common to all cases. Findings from individual cases and cross-case analysis were juxtaposed with evaluation concepts and principles drawn from the literature to develop a useable evaluation framework. The Cases, cross-case analysis and the evaluation framework are discussed in turn, below.

³ An account of cross case analysis is in the Supplementary Material.

SCE cases

WoC diagrams were constructed to confirm and communicate, via a single retrospective snapshot, events within the SCE process and their subsequent effect on each other, as triangulated from interview accounts and documentary evidence (Figure 1). They reveal effects along the dimensions identified in Table 1 and some additional ones (see Table 2), discussed in subsequent section 'Cross-case analysis'. Note, only Case 1 'Urban Design Intervention' is presented in full in the main text; materials for Cases 2 'Supporting Grassroots Participation' and 3 'Supporting Local Authority Plan-Making' are presented in the supplementary material, although we briefly describe them below.

Case 1: Urban Design Intervention

For this SCE the leader of a master-level course collaborated with a senior manager of a housing association (HA) to address the re-design of communal spaces in a large estate. The HA's brief was to develop and conduct consultations with the residents and users of these spaces, and to propose designs. This meant that the SCE became integral to the HA's community engagement strategy, addressing mainly operational issues. In response the students organized several interactive events, such as inviting tenants to a workshop eliciting information on issues one week, and to a design game the following week.

A core objective of the senior manager was to increase residents' interest in managing the estate, which had been neglected. The SCE contributed towards this aim through multiple pathways including increasing trust, and participation and therefore empowerment. Empowerment seemed sustained still at the time of interview (2 years later), if not completely exercised yet. Despite the narrowly focused brief, some outcomes and effects were unexpected. For instance, a much wider group of users took part in the consultation and a follow-on project (for one building's basement) was initiated. Analyses did not reveal openly harmful effects for the SCE participants – although in this case residents could not be accessed for interviewing due to the time lag between the SCE and the evaluation.

Moreover, the HA senior manager confided that while working with the university was fruitful the requisite coordination tasks intensified HA liaison staff's workload substantially and a pause was needed after two iterations.

Figure 1: Web of Change for Case 1

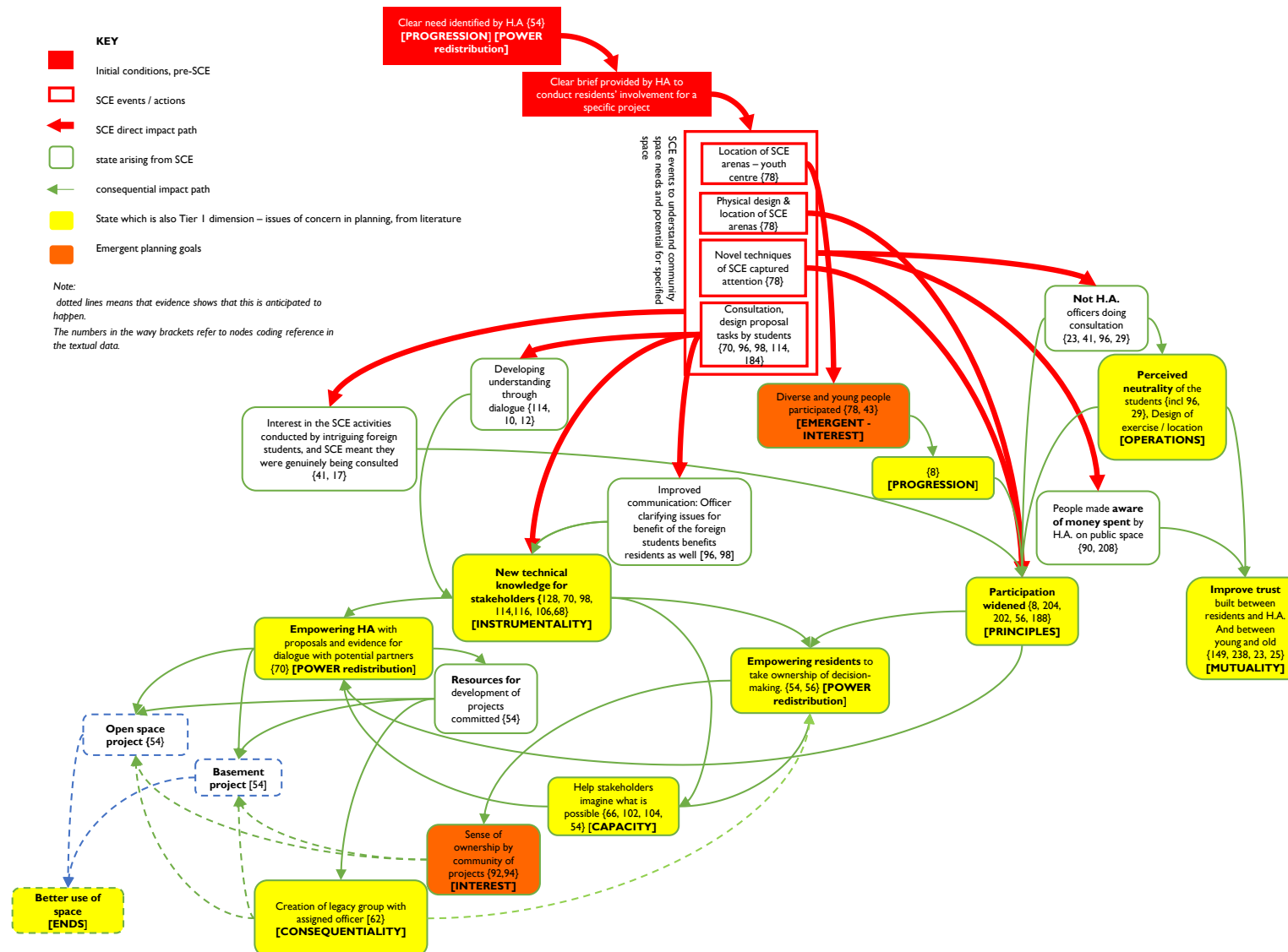


Table 2: Summary of SCE Effects for Case 1, Tier 1 Dimensional Categories (DC)

Effect on Operations (DC1) : The participant numbers were modest, but content and sustained participation was significant. This was attributed to the neutrality of students, and trust in students' ability. Overall, the students were energetic, innovative in their engagement methods and design. Of note were the delight and enjoyment of participants in being consulted. This is not reflected in the WoC.
Effect on Planning 'Ends' (DC2) : The SCE seemed to play a critical role in precipitating the better use of space on the estate, including putting a basement into use and redesigning of the open space around the block; resources for projects were secured. This involved wider participation, dialogue, repeat custom and interest, partly formalized in creation of a legacy group with officer resource.
Effect on Consequential effects (DC3) : Apart from the planning outcomes, mostly around better use of space, a major consequential effect is the increased sense of ownership amongst the participants over the place and the proposals.
Effect on Participant Capacity (DC4) : The student work enabled stakeholders to gain new technical knowledge and insights. Officers gained new ideas from the innovative engagement techniques employed by students and from the substantive content of the proposals. The need for the community liaison officer to explain background issues during the SCE events for the benefit of the students meant that the residents also gained an understanding of those issues. All stakeholders gained from dialogue and iterative discussions about the spaces. The SCE helped participants imagine what is possible. This is a unique feature of planning as a public intervention. Planning is propositional. SCE re-directed the community's imagination, which is a significant impact in itself.
Effect on Progression (DC5) : SCE precipitated a major and surprising change in residents' willingness to participate and start to talk to each other. "... terrific responses, we had lots of young people turning up to those consultations which the youth service couldn't believe..." (Community liaison officer).
Effect on Mutuality (DC6) : This is about trust being built between the HA and residents, and between older and younger community members. There had been historically trust issues between the housing association officers and the residents. The neutrality of the students, and the fact that they were <i>not</i> working for the landlord helped residents overcome this. This, and the consequent commitment of funds by the housing association to physical estate improvements helped increase trust, or at least 'heal a schism' and improve relations, between residents and landlord. The SCE activities in the Youth Centre also began building trust between older and younger residents. Since then, a partnership between the HA and Youth Centre has been formed.
Effect on Redistribution of power (DC7) : SCE empowered two stakeholder groups, residents and HA. This is especially significant for the former group. The SCE has helped re-engage people more widely and effectively, and instill confidence. This was achieved partly due to new technical knowledge which helped them to imagine possibilities for the public spaces. Resources committed for projects with the visible commitment of officers and creation of a consultation group reinforced this empowerment.
Effect on Participant Satisfaction (DC8) : The repeat attendance at SCE events demonstrated that participants were happy, even delighted with the SCE and interested in issues it raised. People felt valued, and this is reflected in a sense of ownership and interest over the issues. At the same time, the SCE enablers (HA officers) were very aware of the risk from unexpected outcomes and the need to manage expectations.
Effect on Adhering to Principles (DC9) : The key principle adhered to seemed to be representativeness and fairness of participation. A major effort was made to involve a full range of stakeholders. Due to the historic lack of trust between residents and HA, the HA anticipated a low turnout at the SCE events.

The unanticipated, ancillary effects came as a surprise for the broker from the HA – particularly the high levels of participation, the diversity of participants which included hard-to-reach groups (e.g., young people), and repeat participation. These effects were attributed in part to the innovative involvement activities (choice of venues such as the youth club and techniques) which aroused the interest of residents. There was also the novelty of foreign students conducting the activity. Residents felt that they were at last being genuinely consulted over the changes to the environment of the housing estate.

Case 2: 'Supporting Grassroots Participation'

SCE activities were part of a Master-level module on community participation in planning for which students engaged in diverse planning activities (Frank and Sieh 2016, 519). This was mainly technical work that enabled the communities to participate in planning. Our study examined SCE work in a fragmented set of communities which were just beginning to work together in response to major infrastructure projects in their vicinity. The analysis revealed three effects. First, the SCE enabled stakeholders to understand each other's needs better by supporting communication between them. Second, this was achieved in conjunction with helping them imagine alternative futures. Third, the results of SCE technical work structured the community's piecemeal responses to consultation. Community interviewees found it difficult to state what effects the SCE had to begin with. They only settled on the effects outlined above after extensive dialogue within the research interview. This suggests a process of retrospective making sense of the situation.

Case 3: 'Supporting Local Authority Plan-Making'

Case 3 is set in Northern Ireland. The SCE involved the development of a community plan for three housing estates with very different socio-economic profiles. This plan was to serve as the basis for a Statutory Community Plan when legislation allowed (in the following year). The SCE was an extension of the City Council's work on community planning, and provided some of the 'legwork' for the Council. The scope of SCE activity, determined in close collaboration between the local authority officer and the course leader, was neatly demarcated by the objective of requiring a community plan document as an output although the scope was much broader. Similar to case 2, community leaders were not very clear regarding effect of SCE on their communities. A notable contribution of Case 3 to the

Dimensional Categories is the recognition of 'the sense of ownership' over plan and place. This is an important impact considering the frequently encountered apathy of the general public in respect to planning issues and let us to amend our *a priory* evaluation framework by an additional Tier 1 Category – 'stakeholder Interest'.

Cross-case analysis

Five findings were significant from the cross-case analysis.

First, we observed effects that were unexpected and falling outside initially identified categories. Pearce (2002 in Ruth, et al. 2015, 27) notes that such ancillary benefits "may exceed primary benefits". In our data they emerge as a prominent feature which both demands evaluation, and a conceptualization of evaluation that captures them. Second, many of the SCE participants interviewed had considerable difficulties in identifying SCEs impacts. So, not only do SCEs produce meaningful results outside of planning's classical purview, they also produce planning results which are not apparently meaningful to the end users' community. Third, the research (interviews) provided the opportunity for participants' to grasp the value of SCEs activities; research was not a disinterested activity of observation. Community members expressed directly contradictory meanings in two of the three cases. Most notably in Case 3: "It hasn't really impacted us in any respect to be honest" and at the same time, "...it may have helped built relationships between the sister and community groups by bringing us together...". This suggests that interviewees were 'thinking aloud', making sense and recognizing effects in response to the interview questions. The research thus achieved the planning task of linking community members' lived experience of their place to a projected planned future facilitated by the SCE. Sometimes, it did so simply by providing the opportunity for dialogue. Fourth, SCEs affect how stakeholders relate to one another. In Case 1, SCE helped to rebuild trust. Students were 'neutral brokers' affecting the dynamics of dialogue between stakeholders. In Case 3, SCE contributed to the formalizing of partnership arrangements. In particular, relationships of power were affected by SCE activities and design, for example, by deployment of neutral brokers, by enabling voice and dialogue (Cases 1 and 2), and by having produced evidence to be used to achieve consequential effects (all Cases). Fifth and finally, it took a mapping technique that enabled display and analysis of sequence and dependencies, what we called 'Web of Change', to

make sense of the overlapping narratives of multiple stakeholders. This suggests that sequence, path dependency, direction of SCE trajectory and temporal configurations are important considerations in evaluation.

What do these five features - 'unexpected effects', 'meaninglessness', 'non-neutrality', 'effect on mutual relationships', and 'sequentiality articulation' mean for the design of evaluation?

In order to account for unexpected effects, 'Ancillary Benefit' should be used as an additional Dimensional Category (DC) for effects that are not planned. The prominence of unexpected effects means SCE designers need to pay attention not only to process and context of SCE encounters (DC1) but also to any consequential effects (DC3).

Regarding the lack of meaningfulness and the role research played in remedying this, evaluation should capture whether meaningful participation is enabled by two things: first, the substantive content of SCEs ("is this a matter that the participant cares about") and second, the design of the participation process. This suggests, in turn, that SCEs need to be evaluated for whether they address the 'Interest of participants' and a need to take participant capacity into account (DC4). Capacity is predicated on opportunities for accessing the participation arena (e.g. "Does the participant have confidence, credibility and empowerment to take part?") and it derives that 'Opportunity to participate' should therefore become another additional Dimensional Category.

In light of SCEs potential to affect mutuality – an aspect already captured in the Tier 2 dimensions of 'building of trust' and 'public spiritedness' - there is a need for evaluation to make visible the distribution of power (DC7) between stakeholders, and how SCEs might reshape these power relations. Power distribution and empowerment arise from confidence, technical knowledge, having resources, self-perceived credibility, and from contextual features, all reinforced through positive feedback. Evaluations should be designed to capture potential changes in relationships as potential benefit or threat of SCEs.

Finally, if a material aspect of SCE effects is the 'temporal configuration of progression', we might actually need to map change over time during an evaluation, which will help us identify quick wins as important preludes of a more distant end state in the future, which then sustains the momentum that maintains participant interest.

Based on these insights, Table 3 offers a revised menu of dimensions for SCE evaluation as a first cut research finding. The additional three Tier 1 dimensional categories (in bold italics) derive from insights of our cross-case analysis. ‘Interest to participate’ points to the meaningfulness of the SCE for stakeholders. ‘Opportunity’ to access the arena for participation is dependent on capacity, and quite often, on timing. ‘Ancillary benefit’ acts as a ‘catch all’ for as yet unidentified dimensions of evaluation interest. Reference to these dimensional categories can focus evaluations on stakeholders’ and wider public interests and values. A further reduction to 8 areas of interest plus a ‘catch all’ (Tier 0), probably the limit of meaningful reduction, may increase user-friendliness as an evaluation framework.

Table 3: Expanded list of Dimensional Categories for SCE evaluation, and further reduced categories

Expanded Tier 1 Dimensional Categories	Tier 0 Further reduced categories
1. Event operation	Operation: regarding how the SCE events proceeded
2. Progression	Capacity: ability of participants to take material action;
3. Capacity of participants	
4. Planning ‘ends’	Ends: outcome of a planning project, intended or actual
5. Consequences	
6. Mutuality	Mutuality: describes relations between stakeholder groups
7. Distribution of power	
8. Participant satisfaction	Satisfaction: satisfaction of participants with event
9. Principles, values or ideology	Ideology: high level principles, related to world view
10. Interest to participate	Interest: interest of participants in the matters at hand
11. Opportunity to participate	Opportunity: opportunity for participants to take part in material action
12. Ancillary Benefit	Catch all

A framework for evaluation in SCEs

To practically design and conduct planning SCE evaluation, both, dimensions and a shopping list of evaluation design recommendations need framing, so they can relate to each other.

The framework design reflects a double recursion. First, it needs to capture the design features of the evaluation approach - encapsulated in the four questions below. At the same time it needs to respond to salient characteristics of the student planning activity - captured by the dimensions discussed in Tables 1 and 3, and referred to in points 2b and 3 of the framework below. This framework provides the scaffolding for designing a customized evaluation that responds to a particular SCE. It is a practical theory of planning evaluation in SCE contexts.

1. What is the purpose of the evaluation, and for whom?
2. What is the conceptualization of:
 - a. evaluation itself, and
 - b. the object of evaluation, i.e. those effects of SCEs on trajectory of planning situation that matter for the evaluation purpose and stakeholders.
3. What aspects of the evaluation object (i.e. 2b) are to be assessed given the evaluation purpose (i.e. 1)?
 - a. What aspects of trajectory change matter to the community?
 - b. How did/does the change happen?
 - c. Why did/does the change happen?
4. What should the procedures, arenas, enablers of the evaluation be like?

We discuss the four points in detail below.

(1) The purpose of evaluation

The design of an evaluation should self-evidently be related to the evaluation's purpose(s), and to the purposes of the activity being evaluated; here, this is both planning, *and* the teaching and learning of practical planning skills. This ensures the meaningfulness of the evaluation to stakeholders, and underpins the trustworthiness and plausibility of the evaluation results. For educators, the purpose for evaluating SCEs is also to protect interests of communities affected as part of educational institutions' ethical commitments. This necessitates clarifying purposes of the stakeholders and their motives to act through a mapping of stakeholder positions. Other purposes for evaluation can emerge during the SCE itself. This is illustrated in Case 2 where problems, aims and goals of planning are only beginning to be articulated. Consequently, a suitable evaluation approach will need to allow flexible and timely adjustments. In Case 2, the inability of the SCE to explicitly address or articulate stakeholder needs may have contributed to the lack of meaningfulness of the SCE to community stakeholders, a stand-out finding across cases (but particularly cases 2 and 3). However, the cases also provided a clue for how to deal with meaninglessness through evaluation. This is to conceptualize evaluation as 'constructing', not just 'evaluating' meaning *ex post*. The corollary is that evaluation is not neutral. Like our impactful research actions, evaluation as construction will inevitably play a role in the planning outcome. Consequently, it makes sense to involve participants throughout the SCE in setting the

evaluation agenda. To summarise, if we are to make intelligible the full range of SCE effects, the Cases point to a conceptualization of evaluation theoretically-consistent (Chen 1990) with a constructivist evaluation approach (Guba and Lincoln 1989) based on an interpretivist epistemology.

Eliciting evaluation purposes necessitates a ‘drilling down’ into each intermediate situation within the WoC to capture the action-informing preferences, as well as relative power and perception of others, of each stakeholder, and of their inter-relationships. The literature suggests a ‘Value Network Analysis’ (VNA) can help uncover these underlying drivers, and show us the capacity, interest or opportunity to act. VNA, originally used in business, is a value-focused overlay for a social network analysis, but has also been used effectively to analyse value relations in social impact situations (Dhondt 2016; Allee 1997). A VNA can be conducted for any ‘state’ articulated within the WoC to capture and depict value positions and make clear, at a single point in time, institutionalized relations of cooperation between stakeholders and a person’s relations to other “persons, and (between) persons and their environment” (Girard 2010, 307). From the case data, we had just sufficient information to determine ‘What changed’ and to offer best guesses ‘How change happened’ but not to do a satisfactory VNA. Yet, we suggest that the design of evaluation needs to maximize the possibility of such a value analysis if, for that particular evaluation, ‘explaining why’ is important.

(2) Conceptualization of evaluation, and of the objects of evaluation

The effect of SCE intervention can be conceptualized as a shift from state A in the planning situation, to state A2 (as opposed to state A1 which is without SCE intervention) (Figure 2). The SCE intervention can be said to *cause* the State A to State A2 trajectory (Figure 2a). In what is effectively a ‘change model’ (Chen 1990), State A2 is the result of that intervention. The conceptualization of SCE evaluation we take is as actions taken to make intelligible the effects of SCEs on the planning situation’s ‘trajectory change’ and its ancillary and consequential effects. Since the evaluation purpose is to deliver community interest, the evaluation of this ‘trajectory change’, can be operationalized by assessing changes in the

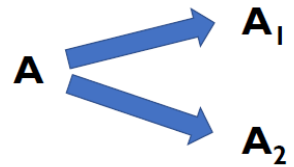
distribution of resulting net benefits and disbenefits⁴ amongst the range of stakeholders. In other words, the evaluation assesses how each community stakeholder's value has shifted as a result of SCE intervention. This SCE conceptualization is in line with our empirical data, which highlighted the importance of change over time, rather than simply static states.

Planning's trajectory is not linear, however. It involves many shifts, and there may be multiple pathways that relate A to A2. This is corroborated by for example, Cerreta (2010) in the idea of planning being propagated within a decision *network*. The Web of Change (WoC) as a technique of representation allows to capture this complex network. WoC's nodes represent either a situation that is nominally the start or end of the snapshot of the planning context or the immediate effect of an SCE intervention, what Chen (1990) calls a "determinant" or causal factor that arises consequent of the intervention for the end State⁵. The beginning and end States (A, A1, A2) are represented as a cluster of situation nodes, and each SCE intervention's effect is an intermediate node. The Web could be multi-final, i.e. a single initial state leads to multiple end states – as well as equifinal, i.e. multiple initial states result in a single end state (Reeb and Folger 2013). The fruitfulness of the WoCs as an analytical method was demonstrated through our three empirical cases (e.g. Figure 1).

⁴ Otherwise known as 'value'

⁵ Note, we have used 'Situation' with capital S so far to refer to the combination of planning circumstances for an entire Case, i.e. whose relevant defining characteristic is the State of things, and now we used 'situation' small 's' to discuss the smallest identifiable component of the Situation.

Figure 2: SCE effect operationalized



2a: SCE effect as trajectory shift A-A1 to A-A2

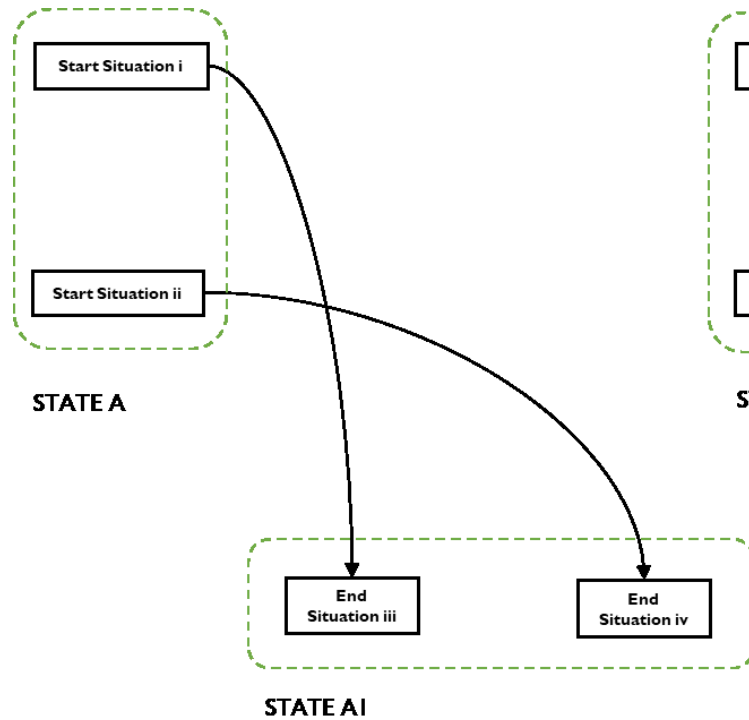


Figure 2b.1: without SCE intervention

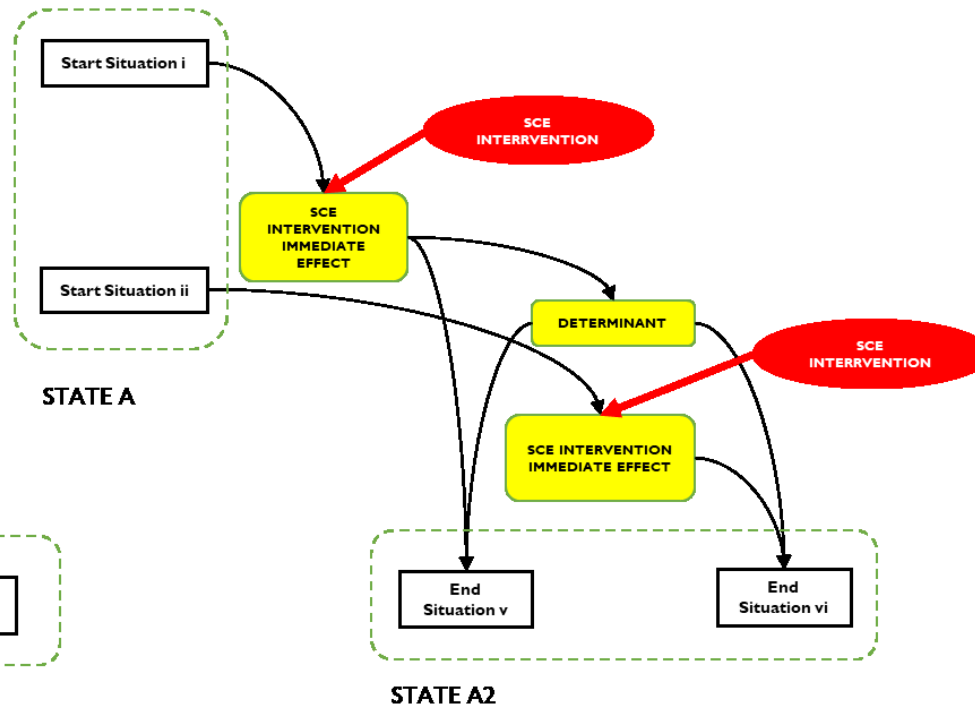


Figure 2b.2: with SCE intervention

We can now theorize the Web of Change (WoC). The WOC representation makes visible and aids analysis of the consequences of an intervention because it allows to set out the possible array of objects of evaluation. It sets out the 'states of things' in the planning situation, which can be assessed in terms of stakeholder benefits, and thus, the distribution of benefits between different groups. It also allows us to identify the changes in states over time and structure the evaluation of planning SCE's effects.

These ideas – the web of trajectories and the change in them, as well as the act of visualizing them to make sense of narratives– give evaluators as set of techniques for evaluating complex community planning processes. Only when evaluators understand what different stakeholders value, how they construct those values for themselves, and how the various values are distributed among stakeholders, can evaluators be confident to have 'evaluated' something.

(3) What aspects of the evaluation object are to be assessed, given the evaluation purpose?

In view of the constructivist evaluation approach that is emerging as preferred, evaluators need to select dimensions on a case by case basis, as well as ensure self-reflexivity. Here, a logic model of the planning process, such as used in *ex ante* evaluations, can help pinpoint what components of a planning situation a SCE activity may affect: planning input, planning process and context, result, or longer-term consequence. Additionally, values, or 'net benefits', can be assessed either as impact, outcome or satisfaction, three alternative ways of expressing effects (Table 4). The selection amongst these 12 items will depend on what stakeholder and audience demands of the evaluation, but also the resources available. While 'outcome' is simply 'what happened', 'impact' is 'what happened because of the intervention' (e.g., Clark et al 2004). 'Satisfaction' differs from impact and outcome because it explicitly admits subjective valuation and is simply and unapologetically related to the opinion or feeling of the stakeholder regarding the intervention.

Putting 'impact-outcome-satisfaction' together with the logic model of the planning process ('input-process-effect-consequence') gives us a systematic framework of SCE effects which the Dimensions can address, and which evaluators can also use to frame the stream of information to identify what other issues are relevant to stakeholders. With this, we are

able to link ‘Dimensions’ (concepts, however packaged) that are important to stakeholders, to a deduced theoretical framework.

Table 4 Evaluator’s perspective of the logic of dimensional categories

Value of effects	Value of effects of SCE intervention on input	Value of effects of SCE intervention on process and context	Value of effects of SCE intervention on result / output	Value of effects of SCE intervention on consequences
impact	Impact of SCE intervention on input	Impact of SCE intervention on process	Impact of SCE intervention on result / output	Impact of SCE intervention on consequences
outcome	Outcome of SCE intervention on input	Outcome of SCE intervention on process	Outcome of SCE intervention on result / output	Outcome of SCE intervention on consequences
satisfaction	Satisfaction with intervention in input	Satisfaction with intervention in process	Satisfaction with intervention in result	Satisfaction with intervention in consequences

(4) What should the procedures, arenas, enablers of the evaluation be like?

As stakeholder interests and community goals are neither immutable nor constant, and new meanings of SCE and unexpected outcomes emerge even during evaluation, educators will benefit from conceptualizing SCE evaluation as integrated in the SCE design and implementation process, and ongoing, rather than just *ex post* and one-off. ‘Integrated evaluation’ will enrich data sets collected through immersion of evaluators, enhance meaningfulness of SCE activity and of its evaluation while enabling rapid adjustments to capture ancillary benefits of SCEs.

The problem of meaninglessness and the need to ‘make visible’ tacit effects will be at least in part overcome through a co-construction of the evaluation. It will enable participants to express, develop and deliberate their values with one another as fully and freely as possible. This naturalistic constructivist approach to evaluation as first favored by Guba and Lincoln (1989) shifts the focus of evaluation to ‘managing meanings’ and away from ‘measuring values’. It entails a fundamental change in the understanding of what evaluation is – i.e., it is a co-construction done *with* evaluands (i.e. community) rather than an assessment done *to* or *for* them. The principles of demonstrating causality as well as the neutrality of the evaluator are replaced by the principles of inclusivity of voice and a concern with power balance between participants (Guba and Lincoln 1989).

Integrated evaluation is an essential part of the continuous feedback mechanism in the process of creating and changing of places through elaborating strategies and organizing hopes. The literature has highlighted that reflexive evaluation (feedback) is necessary for a variety of reasons: a) external and internal performance management, b) assessing if vision and objectives of planning are met and deployed for public accountability, and c) for public political communication. As such, evaluation can actively direct the overall trajectory of the planning process (Girard 2010), thereby enabling the participating community to shape possible alternative futures of a place.

For integrated evaluation the *design* of the evaluation becomes an inherent part of developing the SCE itself. The data suggests that significant practical considerations for designing evaluation derive from the design of the procedures and arenas and how these enable people to meaningfully participate. So, while, in theoretical terms, we advocate the breakdown of subject-object dichotomy by embracing a constructivist approach, in practical terms, it will be necessary to consider how this affects student tasks, which may also involve evaluation tasks. The literature on community participation suggests that we should be concerned with the following qualities of the SCE process⁶: transparency (a, b, c), fairness (a), empowerment of participants (a, d), timeliness and early involvement of stakeholders with sufficient notice given (b, c, e), comfort and convenience of participation (b, e), representativeness and inclusiveness (a, b, c, e, f), availability of non-technical information and high quality information (b, c, f), and participant satisfaction (a, b). The cases demonstrated that despite thoroughness with which educators prepared to ensure broad and fair participation, unexpected problems arose that will inevitably affect the perception of the SCE, and possibly, influence its substantive effect. Any SCE evaluation should be designed to address practical as well as conceptual issues of access and opportunity to meaningful participation.

⁶ a: Laurian and Shaw 2009; b: Brown and Chin 2013; c: Chompunth and Chomphan 2012; d: Winkler 2013; e: Conrad et al 2011; f: Faenhle and Tyvainen 2013

Conclusion

To conclude, despite a proliferation of SCEs there is limited understanding of the effects of such engagement on communities who represent a central concern for planning and urban design academics and practitioners. Our research sought to develop a systematic evaluation approach by confronting three SCE cases with concepts and theories from the wider planning and policy evaluation literature. Based on a review of the general public participation and planning evaluation literature and case explorations we therefore conclude by proposing a practical theory of planning evaluation in the shape of the evaluation framework of four questions.

Student Learning and Curriculum Development

One implication for the design of SCE in planning curricula is that evaluating SCE effects on community should not be seen as burden or extraneous task but as a new opportunity for student learning *with* communities by embedding evaluation design skills development into the curriculum: “the whole point is getting students to interact directly with the community and learn from that, *while benefitting the community as well*” [course leader, Case 2, our italics]. Since one reason of using SCEs in planning curricula is to familiarize students with situations involving inter-personal and power relations in a public context, and enable them to exercise communicative and strategic interventions, the incorporation of evaluation is a unique pedagogical opportunity. Students can be involved in the conduct of evaluation through reflective diaries and by including evaluation as part of their SCE assignments. An option that requires more coordination is having evaluation done by students on a parallel course, where the main focus is on evaluation theory and practices.

Limitations and Further Research

As research was initiated after the end of the SCEs, access to participants was difficult; SCE effects could not be evaluated in depth and directly. Resource constraints also meant that we interviewed a maximum of 4 persons per case, which does not exhaust the insights about SCEs and impacts that can emerge. Nevertheless, this small-scale exploratory study sets the scene for future research on evaluation of SCE effects on communities.

For example, action research to test, in practice, the designs of SCEs with integrated evaluation, and also some of the proposed evaluation approaches, such as VNA, will be

necessary to assess the feasibility of the concepts and principles of evaluation in HE settings. A larger cross-institutional study will be useful to allow for more comparison of different situations and settings. The concepts may also be tested via more immersive research approaches, such as ethnographical studies, which might be more suitable to make the dynamics of planning situations intelligible.

The discussion above and the literature (e.g., Bryson, et al 2013) suggest that arenas, participatory techniques and enablers can matter to the result of SCE evaluation and could benefit from monitoring. The importance of using 'neutral brokers to build trust' or the use of innovative consultation methods (Case 1) are examples of how 'enablers' and 'arenas' were able to affect planning outcomes. However, as the cases were able to tell us very little about how context informs evaluation design, further research is needed.

The problem of evaluating against the counterfactual to understand more rigorously the difference made by SCEs will always remain. However, this could be at least partly addressed by more thorough *ex post* evaluation which focuses on community members' responses to SCE. This will require considerable planning already at the time of setting up the SCE to ascertain community members' research participation.

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Supplementary Material

Below are Cases 2 and 3 in full, in a similar format to how Case 1 is presented in the main text.

Case 2: 'Supporting Grassroots Participation'

SCE activities were part of a Master-level module on community participation in planning for which students engaged in diverse planning activities, including mapping, GIS and policy work (Frank and Sieh 2016, 519). This was mainly technical work that enabled the communities to participate in planning debates more aptly. The module was facilitated by a broker organization which supports a loose network of affiliated community organizations with a mission to facilitate more effective participation in planning. The organization enabled contact with its member organizations which in turn provided opportunities for students to carry out SCE. Our study focused on SCE work in one of the localities, where there was a fragmented set of communities just beginning to work together in response to major infrastructure projects and new developments in their vicinity. The communities were at the very early stages of defining themselves and developing strategies for getting heard. "(The) communities there are very fragmented, very frightened, voiceless, divided ... and the students have been helping them building community networks," said one Course Leader. The analysis revealed three effects. First, the SCE enabled stakeholders to understand each other's needs better by supporting communication between them. Second, this was achieved in conjunction with helping them imagine alternative futures, via some technical

research and propositions, as well as presenting precedents of ‘what could be done’. Third, the results of SCE technical work structured the community’s piecemeal responses to consultation, and thus contributing to their empowerment. An interesting feature of this case (and also Case 3) was that community interviewees were able to describe what the students did, but found it difficult initially to state what effects the SCE had. They only settled on these after extensive dialogue within the research interview. This suggests a process of retrospective making sense of the situation and reflects the nature of plan making outlined in the most recent planning and evaluation literature.

Case 2 Effect on Operations (DC1)

The operations are described in greater detail throughout the discussion and revealed the following. First, **the process of SCE** was the biggest contributor to its effect, rather than its substantive content. For example, SCE opened doors for Community Leaders, who were able to meet more people. Second, the process started with outreach around the SCE enabler’s strategic planning needs, but as the students’ own interest shaped project briefs, the results in form of **deeply-focused individual projects became fragmented**, rather than offering a big strategic approach which would have been preferred by the community. The SCE’s **set up may also have prevented more and potentially valuable engagement with local authority** officers and politicians.

Case 2 Effect on Planning ‘Ends’ (DC2)

First, there were no obvious planning ‘ends’ met, and none were recorded in the WoC. The students were conducting background research for ‘planning’, and there was direct usage of the resulting evidence in community submissions to parliament and less formally, to the council. This raises the question of the scope of ‘planning’, and where its limits are. To complicate things, it was noted that it was **the very process of the SCE**, rather than the substantive content of the students’ work that made the most difference to helping community move towards their planning goal (ill-defined as it was), an ancillary benefit.

Second, the quality of outputs were very good, but perceived by the community leaders as not as **relevant**. Could this be because of how the multiple objectives of different stakeholders were dealt with? Both the students, who were encouraged to develop their own interests, and the enabling organization, which has a London-wide policy focus, added

more 'objectives' to each project, i.e. different 'ends'. As discussed in Frank and Sieh (2016), the clarity of objectives of key stakeholders in the SCE - identified as 'community objectives' and 'learning objectives' – are important from the start. In this case, there are further 'enabler objectives' and 'students' project objectives' which differ from Learning Objectives, accompanied by less-than-formed Community Objectives. These circumstances could have had an effect on the relevance of SCE for community.

Case 2 Effect on Consequential Effects (DC3)

A first effect was achieved through two channels by which **dissemination of evidence generated by SCE took place via communication to external parties** (directly to parliament via other community members' petitions, and by sharing student research with the local authority). From the case interviews, the intention to effectively disseminate evidence in pursuit of influencing the direction of the planning situation was certainly one intention for at least one of the participating community leaders, even if this was never explicitly stated. A second effect was the **achievement of 'designated community'** more quickly, which added to the credibility of the community group and influencing planning outcomes. From the WoC, we have **a third consequential effect, which is to 'help community imagine future'**. This should perhaps be a core planning outcome, not just consequential, but is often forgotten.

The construction of 'consequential effects' raises many questions, a key one being whether 'ancillary benefits' are the same as 'consequential effects' and whether they need their own dimensional category. The conclusion was that while there are overlaps of the two – i.e. some ancillary benefits are also consequential effects – it is necessary to consider them distinct concepts in practice. This in turn raises the question of whether we need a Dimensional Category of 'ancillary benefits'; it was concluded that since most effects in SCEs are ancillary, it would make sense to simply assume that any ends that are not 'planned' are ancillary, with no need to create a new Dimensional Category for ancillary benefits.

Case 2 Effect on Participant Capacity (DC4)

There are two clear channels by which the SCE had an effect on participant capacity. First, there were many evidence-generating pieces of work by the students including "analytical work,... surveys, ...mapping, and helped decode some planning documents. Looking at the

London plan which is 400 pages. The borough plan they don't even know what it is because it consists of ... documents all with slightly different standing. ... That sort of demystifying how people navigate through these documents" (Case 2 Course Leader). The design of the SCE seemed to focus on the increasing of technical capacity of community participants. The creation of knowledge can inform community members, which increases many types of capacity. Here, it enabled technical arguments that could be put forward confidently as evidence in extra-community communication. This has a knock-on effect of confidence, credibility and empowerment. Second, students helping to create arenas for exchange of information and networking led to intra-community capacity building. This structuring of issues for the community resulted in direct learning by community members as well, and would have been useful to share with local authority and politicians as well. "(It) started us realizing that we needed evidence". Last, an important consequence is that SCE helped community develop the capacity to imagine what was possible in the future, through the mix of precedent-sharing and evidence-generation.

Case 2 Effect on Progression (DC5)

The presentations and workshops, and general administrative help to create community consultation events provided by the students to community aided progression. The SCE may have accelerated the recognition of the wider Group (the multi-community alliance) as an official 'designated community', which allowed them to be consulted on other relevant projects. Apart from this, there is little evidence that SCE affected progression of the group's agenda.

Case 2 Effect on Mutuality (DC6)

The students carried out a range of activities including individual projects which were technical or translational (between professional and lay understanding), helped with organizing / presenting at community group's conference, as well as providing a presentation of precedents to community groups. One community leader suggested that "it was the (SCE) process itself (that) brought people together more than the (substantive content) of what the students did... so the fact is that you know we had (the course leaders) contacting us and then it meant that actually it did open doors for us meeting other people sort around the area" (Case 2 Community Leader). The WoC suggests that this complex

interaction of factors increased mutual understanding and created the possibility of working together for mutual benefit.

Case 2 Effect on Redistribution of power (DC7)

These “fragmented” communities have always been “a silent community” (Community Leader). The SCE had begun to change this situation, empowering them, for example, by involving community right from the start to shape the activity to be relevant. The WoC shows a multi-lateral web of channels that fed 'empowerment'. Underpinning this is knowledge that SCE generated from the students’ research as well as from presentations of ‘precedents from elsewhere’ that gave community confidence about what may be possible, even as they were still in the process of positioning themselves. The community felt that being informed gave them credibility when communicating to others, as did going to council meetings with students as this showed that this group was serious and “not just busybodies”. Confidence built up as community felt that they were being listened to. To summarize, we see that confidence and credibility – two indicators of empowerment – can emerge from various types of knowledge such as ‘precedents’ or ‘technical knowledge’ as well as through contextual features (students and course leaders accompanying them to council meetings), and reinforced through feedback (being listened to). Consequently, the community was able to negotiate the size of the neighborhood, and to gain designated community' status more quickly. Notably, SCE empowered not just community, but its other participants, including the enablers. In respect to the wider ‘balance of power’, one community leader, however, felt that the students ‘missed a trick’ to increase the impact of their work by not engaging with local authority officers and politicians.

This narrative would have been appropriate for a Value Network Analysis.

Case 2 Effect on Participant Satisfaction (DC8)

Community Leaders were highly satisfied with the quality of work, but less so with the scope, which could have been broader rather than focus on a particular physical aspect in the area, a canal. They would also have preferred discussion of the major national infrastructural project affecting the area. They noted that community expectations could have been better managed. Yet, the Course Leaders and SCE brokers had taken steps to adhere to a published SCE protocol and provided free access to information and reports. Finally, community

leaders sensed that the SCE enablers did not want to get involved in publicity, something that would have helped the community significantly in this Case. This echoes the findings in Case 3, where there are unavoidable mismatches between community and learning or other objectives, which can never be completely resolved.

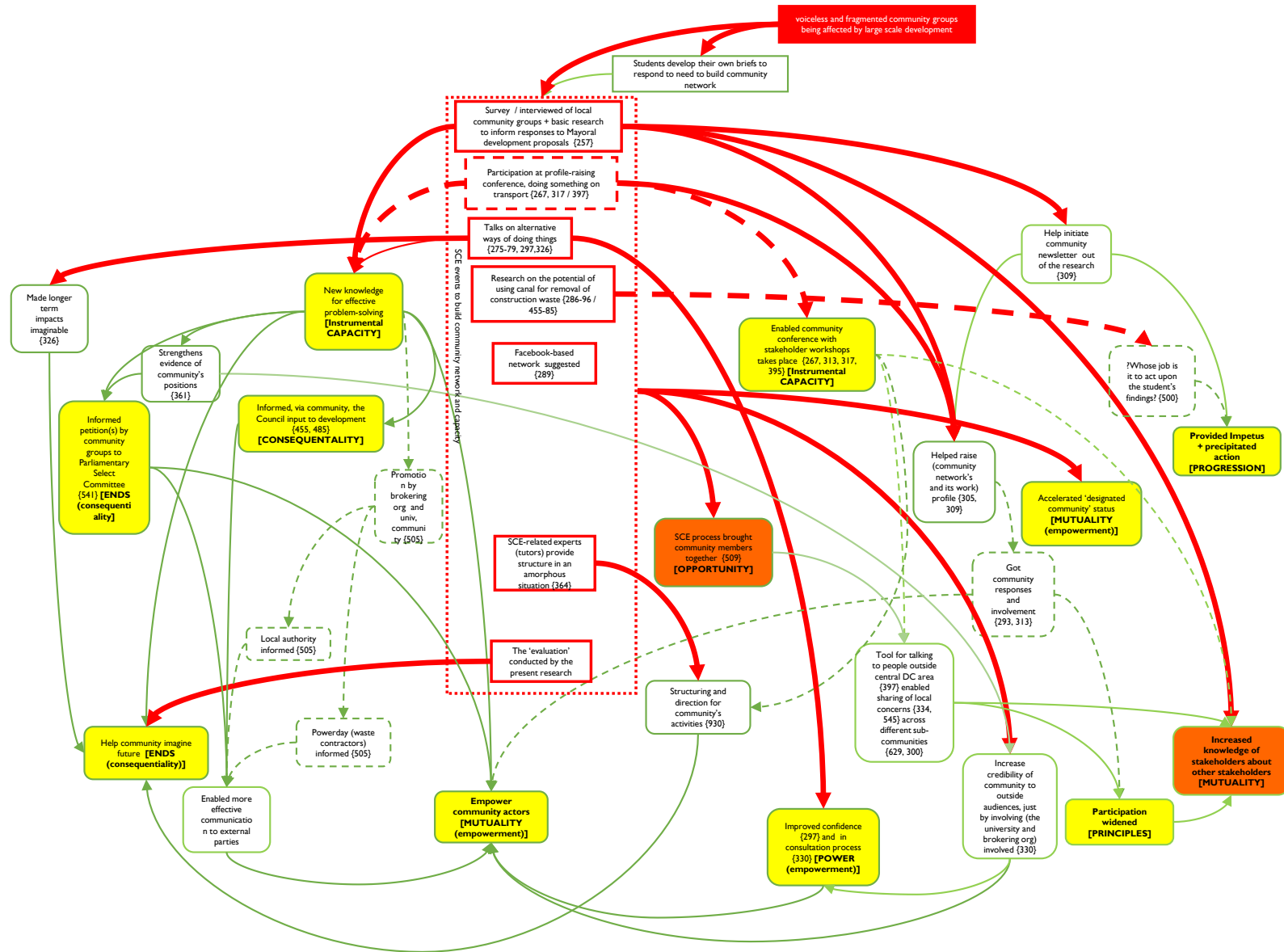
Case 2 Effect on Adhering to Principles (DC9)

Two key principles were adhered to by this SCE. The first is the notion of 'fairness' in relation to wider meaningful participation, which the SCE helped achieve in supporting the intra-community conference, sharing precedents and research results. SCE also ensured inclusiveness of concerns through 'collaborative' brief setting open to all groups in the community. A second principle is the attitude by which the SCE is approached: "The philosophy is mutual aid, it helps students to learn about the city and they help citizens of their group to achieve their objectives better. That's a very important principle" (Course Leader).

Case 2 Emergent Dimensional Category: Unexpected / unexpectedness of Ancillary Benefits

"The process itself brought people together more than the (student-generated substantive content) did", for example, through the 'opening of doors' and 'meeting people' via the Course. The evolution of the community's understanding and hence capacity – in this case, the community starting to realize that they needed evidence - should not be a surprise, but it often is. While Course leaders often try to 'design out' the unexpected, but some unexpected features are beneficial.

Figure S.1. Web of Change Case 2



Case 3: 'Supporting Local Authority Plan-Making'

Case 3 is set in Northern Ireland. The SCE involved the development of a community plan for a set of communities comprising three housing estates (one mixed Catholic-Protestant, and two predominantly Protestant with very different socio-economic profiles). The document was to serve as the basis for a Statutory Community Plan when legislation allowed (in the following year).

The SCE thence was an extension of the City Council's work on community planning, and effectively provided some of the 'legwork' for the Council. Like Case 1, the scope of SCE activity was neatly demarcated by the objective of requiring a community plan document as an output although the scope was much broader. The scope was determined in close collaboration between the local authority officer and the course leader, but without necessarily the direct input of the community members themselves. The coverage of the plan document was of three physically distinct but neighboring communities.

Evidence of effects was mainly gained from interviews with broker and course leaders; community leaders were less clear regarding effects on their communities. The abstract and long-term-future-focused nature of a Community Plan document with significant intangible content, in contrast to say, consultation about a community space, may have meant that community members were less able to imagine the effects of such a Plan, and thus, of the SCE activity in which they participated.

A notable contribution of Case 3 to the Dimensional Categories is the recognition of 'the sense of ownership' over plan and place. This does not fit under any existing Dimensional Category, and merits the suggestion of an additional Category – 'stakeholder interest'. This adds to that of 'capacity' to affect an issue, and community engagement in planning issues and is an important impact considering the frequently encountered apathy by the general public in respect to planning issues.

Case 3 Effect on Operations (DC1)

The Course Leader designed a highly structured approach, but one that brought people together to discuss potentially contentious issues in a '**safe space**', and to share learning and

build capacity with all participants including community group members, council officers, politicians and of course, students. **Students acted as facilitators** in the workshop sessions, and conducted survey work in the wider community. Great care was taken to ensure issues were relevant and the enabling officer played an important role to that effect.

Case 3 Effect on Planning 'Ends' (DC2)

The effect on planning ends is the same as the SCE output itself, which is the Community Plan. How did the SCE serve the planning 'ends'? It delivered the Community Plan document. "... we're not there to create a wish list for those communities – we're there to have an open and honest discussion... about how we create services" (Course Leader).

Case 3 Effect on Consequential effects (DC3)

The document is an end, but also an enabler - it is a live document which will potentially be adopted to deliver further consequential ends. The fact that the document exists has effects - it keeps people focused and accountable to the principles set out, it is a strong evidence base for arguments.

The Consequential effects are clear and significant. The community was using the Plan, and it had already been used to win funding for a new community facility even though it did not have legal status yet. It was expected to evolve and be used further, and be adopted in some form, statutorily.

The different speeds (quick win versus evolutionary) for consequences to emerge means evaluators need to monitor evolution, i.e., to evaluate at different times post SCE as well as during and before.

Case 3 Effect on Participant Capacity (DC4)

The relevant communities have limited capacity to participate in planning. However, there has been increased interest from the communities to get involved and this involvement has increased capacity in a number of ways. First, the resulting Community Plan is seen as a viable resource in terms of generating future capacity within the community; we surmise this to be confidence in policies based on solid consultation. The documents' abstract nature, unfortunately, makes it difficult for many community members to imagine what it delivers, and how. Second, the SCE exercises in pursuit of producing this document have helped build capacity supporting members to recognize more strategic issues outside their own small

neighborhood. The SCE involved activities which include dialogue and presentations regarding community planning, which resulted in shared learning for community members, politicians, council officers as well as students.

For designing SCE itself and its evaluation, this suggests the need to pay attention to effects on a wider range of stakeholders. In particular, the problem of abstraction in planning and communication has to be overcome if evaluation is to be meaningful. Different types of capacity should be considered: capacity to participate, i.e. access issues; capacity to meaningfully participate, which requires some form of ability to engage in the instrumental argumentation; capacity to take effective action, recognized in the assessment of 'progression' below.

Case 3 Effect on Progression (DC5)

Evidence of SCE providing impetus that was instrumental was observed. The substantive content of the Community Plan document was used as means to progress a community priority, i.e., the creation of a new joint community facility. This might be seen as the 'primary planning benefit' for which SCE played a critical role in catalyzing action towards planning goals. In designing the SCE, the importance of quick wins and creating momentum in process emerged (Course Leader Case 3).

Case 3 Effect on Mutuality (DC6)

Arising out of co-learning and dialogue opportunities is an increase in mutual understanding and better working relationships. Given the backdrop of N.I. and its history of faith-based conflict, this is significant. Underpinning this may be the presence of the students as neutral facilitators. This is a key ancillary benefit as it itself has many positive consequences. Monitoring and understanding what makes mutual understanding happen is important for designing better SCEs in future as this is a benefit that appears in all three Cases, despite their diverse contexts.

Case 3 Effect on Redistribution of power (DC7)

Redistribution of power which includes empowerment of some parties was enabled at two points by this SCE: before the SCE proper in the sense that the university was a neutral party that facilitated dialogue between community actors, and across sectors. During the process of the SCE and preparation of the Community Plan, community leaders were empowered to

voice their concerns that would feed into the substantive plan content. It is also imaginable that communities may be empowered by evidence produced by SCE students.

It is clear that the primary planning aim – producing the community plan – and the primary planning product – the substantive policies / requirements of the plan itself, were only one channel by which interventions wrought change in the planning situation. The others are ‘ancillary benefits’.

Case 3 Effect on Participant Satisfaction (DC8)

Of the two community leaders interviewed, one was far less able to discuss the importance of the SCE. The one who was able, expressed alternative preferences to how the SCE was conducted, but was still generally happy with output and process. Specifically, she would have liked to deploy 'students as manpower' differently, echoing the community leader in Case 2. In Case 3, the manpower was at the disposal of council officers, rather than Community directly. This community leader expressed preference for more direct community-student contact within her community group. This was achieved, but the student-community contact happened with the community-at-large rather than within specific community groups. At the same time, the SCE enabling Council Officer recognized that community satisfaction was tied closely to expectation and it was important not to over-promise. This implies the need to clarify 'beneficiary' and 'audience' differentiation when designing evaluation.

This echoes the situation in Case 2, which illustrates that it is impossible to completely remove all conflicts of objectives, even between partners, and that trade-offs always occur. In both cases, the design of SCEs were carefully crafted to provide these trade-offs (a published SCE protocol and free access to info and reports in Case 2, and iterative set of face-to-face meetings and discussions in Case 3). In both cases, the features of SCE that the community leaders would prefer to have been different could well have been deliberately designed by the Course Leaders. In Case 2, an avoidance of publicity was probably desired by the SCE Enablers, who run a range of planning enabling initiatives across the city and this may be affected by un-managed publicity. In Case 3, the potentially major consequences of minor conflicts in the Northern Irish context could have explained the reason for less direct

contact with community groups in large-scale meetings. Instead, direct contact with the communities was conducted on individual bases.

Case 3 Effect on Adhering to Principles (DC9)

The principle of fairness (i.e., Inclusiveness, ‘widening participation’ and collaboration) has particular resonance in Northern Ireland. The students did plenty of work in street and doorstep surveys to directly involve individual community members, not just community groups. Much work was done to not just keep people informed and to build technical capacity during SCE events, but also to communicate clear benefits of participating, and to manage expectations of outcomes. While SCE evaluation should include numbers of participants, these should be supplemented by an assessment of fairness of access and of actual conduct of SCE.

Case 3 Emergent Dimensional Category: Ancillary benefits, interest

Ancillary benefits of the document itself, as well as from the process to create the document are many, including building **capacity and interest**, co-learning, enabling broader and more strategic discussions. Like elsewhere, interest of the community members / groups was not a given and knowledge that such a document exists was not widespread. These ancillary benefits need to be captured by evaluation and communicated. They are as important as the primary planned benefit (of developing the plan document). Since ancillary benefits may not be obvious to the community members, the Council Officer (SCE enabler) may need to communicate such benefits to manage expectations and to facilitate continued ‘buy-in’ to the SCE project.

Figure S.2: Web of Change Case 3

